CLAIMS

1. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES from which an element to be viewed is visible, wherein it comprises at least a computer application provided with locating means that enable to locate potential and effective visibility zones by means of a set of visibility zone locating criteria comprising:

at least one item of data about location and morphology of the element to be viewed, and at least one potential visibility angle assigned to the element to be viewed selected from horizontal angles, vertical angles and combinations thereof, with which the potential visibility zone locating means automatically locate at least a potential visibility zone assigned to the element to be viewed, and

at least one visibility study region mapped and stored on a computer medium with which, as function of the said potential visibility zone, the effective visibility zone locating means automatically locate effective visibility zones selected from effective visibility areas, effective visibility axes and combinations thereof, from which the element to be viewed is visible.

2. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 1, wherein the set of visibility zone locating criteria additionally comprises at least one visibility zone locating criterion selected from:

orientation of the element to be viewed,

legibility of the element to be viewed,

movement of the element to be viewed,

lighting of the element to be viewed,

morphology of the visibility study region,

at least one potential visibility distance assigned to the element to be viewed,

at least one potential visibility distance assigned to the element to be viewed as function of its morphology,

at least one potential visibility distance assigned to the element to be viewed as function of its size,

at least one potential visibility distance assigned to the element to be viewed as function of at least one viewing time,

at least one potential visibility distance assigned to the element to be viewed as function of at least one viewing date,

percentage of visibility of the element to be viewed,

at least one potential visibility angle assigned to the element to be viewed as function of at least one viewing time, said potential visibility angle being selected from horizontal angles, vertical angles and combinations thereof,

at least one potential visibility angle assigned to the element to be viewed as function of at least one viewing date, said potential visibility angle being selected from horizontal angles, vertical angles and combinations thereof,

at least one optimum potential visibility angle assigned to the element to be viewed, selected from horizontal angles, vertical angles and combinations thereof,

at least one optimum potential visibility angle assigned to the element to be viewed as function of at least one viewing time, said potential visibility angle being selected from horizontal angles, vertical angles and combinations thereof,

at least one optimum potential visibility angle assigned to the element to be viewed as function of at least one viewing date, said potential visibility angle being selected from horizontal angles, vertical angles and combinations thereof,

at least one optimum potential visibility distance assigned to the element to be viewed,

at least one optimum potential visibility distance assigned to the element to be viewed as function of its size,

at least one optimum potential visibility angle assigned to the element to be viewed as function of at least one viewing time,

at least one optimum potential visibility angle assigned to the element to be viewed as function of at least one viewing date,

at least one lapse of viewing time of the element to be viewed, selected from maximum viewing time, minimum viewing time and combinations thereof,

at least one lapse of viewing time of the element to be viewed, as function of its morphology, said lapse of viewing time being selected from maximum viewing time, minimum viewing time and combinations thereof,

at least one lapse of viewing time of the element to be viewed, as function of at least one viewing time, said lapse of viewing time being selected from maximum viewing time, minimum viewing time and combinations thereof,

at least one lapse of viewing time of the element to be viewed, as function of at least one viewing date, said lapse of viewing time being selected from maximum viewing time, minimum viewing time and combinations

thereof,

at least one lapse of viewing time of the element to be viewed, as function of at least one means of transport which moves at least partially through the visibility study region, said lapse of viewing time being selected from maximum viewing time, minimum viewing time and combinations thereof,

direction and course of at least one individual moving at least partially through the visibility study region,

direction and course of at least one means of transport moving at least partially through the visibility study region,

average moving speed of at least one means of transport which moves at least partially through the visibility study region,

degree of visibility from at least one means of transport which moves at least partially through the visibility study region,

estimate of the number of individuals present in a determined zone of the visibility study region per unit of time, as function of at least one of the following sub-criteria: location, time, date, direction and course of moving and combinations thereof,

estimate of the number of means of transport present in a determined zone of the visibility study region per unit of as function of at least one of the following sub-criteria: location, time, date, direction and course of moving, capacity of the means of transport, degree of occupation of the means of transport and combinations thereof,

degree of interference with the visibility of the element to be viewed due to temporary interposition of other

elements, and
combinations thereof.

3. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 1, wherein the computer application is provided with means for configuring at least one visibility zone locating criterion, said means of configuration being selected from: manual configuration, default configuration, configuration by extrapolation from visibility study regions with a similar morphology, configuration by visibility optimization criteria and combinations thereof.

4. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 1, wherein for obtaining at least one visibility zone locating criterion, the computer application access to at least one database in which at least one visibility criterion of at least one geographical location is stored.

5. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 1, wherein the computer application is provided with means for showing the visibility zones located, in at least one format selected from: at least one computer file compatible with at least one computer application, at least one image of the visibility study region where the visibility zones located are shown highlighted, a list of the visibility zones located, at least one mapping layer with associated information and combinations thereof.

6. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES,

according to claim 5, wherein the computer application comprises means for evaluating the degree of visibility of different visibility zones, as function of the degree of achievement of at least one of the criteria of locating visibility zones.

7. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 1, wherein the effective visibility zones are defined by effective visibility axes from which the element to be viewed is visible.

8. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 7, wherein the effective visibility zones are additionally defined by at least one characteristic selected from: a course of effective visibility which specifies the course in which the effective visibility axis has to be traveled in order to view the element to be viewed, a frontal effective visibility space and combinations thereof.

9. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 1, wherein the visibility study region comprises, at least partially, an urban environment where the effective visibility zones are defined by effective visibility axes, courses of effective visibility and frontal effective visibility spaces corresponding to urban streets.

10. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 1, wherein the computer application comprises a module of "assignment of effective visibility axes" provided with means of locating effective visibility

axes, effective visibility courses and frontal effective visibility spaces, that enable to view the element to be viewed, by means of at least one input parameter selected from: at least one potential visibility angle assigned to the element to be viewed, at least one potential visibility distance assigned to the element to be viewed, at least one optimum potential visibility angle assigned to the element to be viewed, at least one optimum potential visibility distance assigned to the element to be viewed, morphology of the visibility study region, morphology and orientation of the element to be viewed, course of movement of individual and means of transport, plans of the visibility study region, visibility zone location criteria and combinations thereof.

11. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 10, wherein within the module of "assignment of effective visibility axes" and comprising an integral part thereof, the computer application comprises:

at least one module of "collection of mapping information" provided with means for locating potential visibility zones comprising spaces selected from potential visibility cones, portions of potential visibility spheres, zones of potential visibility and combinations thereof; and for generating mapping layers of the visibility study region contained by at least one potential visibility zone, by means of at least one input parameter selected from: morphology of the element to be viewed, morphology of the visibility study region, at least one potential visibility angle assigned to the element to be viewed, at least one

potential visibility distance assigned to the element to be viewed, at least one optimum potential visibility angle assigned to the element to be viewed, at least one optimum potential visibility distance assigned to the element to be viewed, plans of the visibility study region, visibility zone locating criteria and combinations thereof; and

at least one module of "location of effective visibility axes and effective visibility courses", by means of at least one input parameter selected from: potential visibility zone and mapping layer generated by the module of "collection of mapping information", morphology and orientation of the element to be viewed, course of movement of the individuals and of the means of transport, visibility zone locating criteria and combinations thereof.

12. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 11, wherein within the module of "collection of mapping information" and comprising an integral part thereof, the computer application comprises:

at least one module of "location of potential visibility zones", by means of at least one input parameter selected from: morphology and orientation of the element to be viewed, at least one potential visibility angle assigned to the element to be viewed, at least one potential visibility distance assigned to the element to be viewed, at least one optimum potential visibility angle assigned to the element to be viewed, at least one optimum potential visibility distance assigned to the element to be viewed and combinations thereof;

at least one module of "location of potential visibility axes on a background map" by means of at least one input parameter selected from: visibility study region plans, urban environment and combinations thereof; and

at least one module of "generation of mapping layers", by means of at least one input parameter selected from: potential visibility zones located by the module of "location of potential visibility zones", potential visibility axes on a background map generated by the module of "location of potential visibility axes on a background map", and combinations thereof.

13. SYSTEM FOR AUTOMATICALLY LOCATING VISIBILITY ZONES, according to claim 11, wherein within the module of "location of effective visibility axes and effective visibility courses" and comprising an integral part thereof, the computer application comprises:

at least one module of "location of effective visibility axes", by means of at least one input parameter selected from: potential visibility zone and mapping layer generated by the module of "collection of mapping information", morphology and orientation of the element to be viewed and combinations thereof; and

at least one module of "determination of the course of effective visibility", by means of at least one input parameter selected from: at least one effective visibility axis located by the module of "location of potential visibility axes", course of movement of individuals and means of transport, morphology and orientation of the element to be viewed, visibility zone locating criteria and combinations thereof.